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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,849	10/02/2003	Yoshiyuki Abe	KAM 20.660 (100799-00084)	5130
26304 7590 03/24/2008 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585				
EXAMINER				
KOPEC, MARK T				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
03/24/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/677,849

Applicant(s)

ABE ET AL.

Examiner

Mark Kopec

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 17-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date 03/03/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 03/03/08 has been entered.

The IDS filed 03/03/08 has been considered.

A non-final action on the merits follows.

Per the action mailed 12/18/07, claims 9-16 are cancelled and claims 1-8 and 17-27 are pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-8, 17-27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Groth (phys. Stat. Sol. 14, 69)), Delahoy (J. Vac. Sci. Technol. A) or Safi (Thin Solid Films).

Initially, note that a full English language translation has been ordered and will be provided to applicant as soon as possible.

Groth (phys. Stat. Sol. 14, 69)) discloses n-type indium oxide films prepared by "spray technique" having different impurities. The films have conductivities up to 4.3×10^{-3} 1/ohm-cm (Abstract). Page 73, discloses Ti doping (6-10 atom%) having 1.8×10^{23} cm⁻³ electron concentration. The reference specifically or inherently meets each of the claimed limitations.

Delahoy (J. Vac. Sci. Technol. A) discloses transparent and conducting In₂O₃ films doped with various elements including Ti (Abstract). The films are produced by sputtering (Abstract; Experiment), and have resistivities and carrier density within the claimed range (1.6×10^{-4} and 4.25×10^{-20} respectively) (Abstract; page 1218). The reference specifically or inherently meets each of the claimed limitations.

Safi (Thin Solid Films) discloses InTiO having between 1-1.55% Ti and resistivities within the claimed range (Abstract; Figure 3; Section 5). The reference specifically or inherently meets each of the claimed limitations.

The references are anticipatory.

In the event that any minor modifications are necessary to meet the claimed limitations, such as selection of a particular amount of O₂ present during sputtering, or use as a solar cell, such modifications are well within the purview of the skilled artisan.

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Kopec/
Primary Examiner, Art Unit
1796

MK
March 13, 2008